informed decision about whether or not to provide that patient with another prescription and/or to screen for potential substance abuse disorder.

[0046] A cap **425** has an upper section **481** and a lower section **483**, which are preferably integrally injection molded or three-dimensionally printed together as a single piece, with a removable, horizontally oriented plug **484** located within a hollow internal cavity thereof. Lower section **483** has an openly accessible bottom **485** bordered by a circular-cylindrical side wall **486** with an internal helical thread **487** formed therein.

[0047] Various electronic components are attached within upper section **481** of cap **425**. These components include fingerprint scanning sensor **423**, a radio frequency identification (RFID) reading sensor **488** and a printed circuit board **489** upon which is mounted a microprocessor **434** and an electrically connected memory chip **490**. A USB port **491**, microprocessor **265** and associated electrical circuits are located on RFID sensing chip **488**. Similarly, fingerprint scanner **423** also includes a microprocessor and electrical circuit mounted on its printed circuit board **492**. All of these electronic components are securely mounted within the polymeric cap **425** with an uppermost surface of fingerprint scanner **423** and the open end of port **491** being externally accessible through apertures in the associated cap surfaces. A battery power supply or RF power source (See FIGS. **2**A and **2**B) are electrically coupled to printed circuit board **489**.

[0048] Furthermore, a cap-to-container lock **443** includes an electromagnetic actuator **493**, preferably a solenoid having a movable plunger or armature rod **343** with a coil winding. In a nominal condition after cap **425** is screwed onto container **435**, with the medication **23** therein, rod **343** is nominally extended downwardly (or alternately, inwardly toward a rotational centerline if the solenoid is differently oriented). In this condition, the rod abuts against or is received within a slot or hole in an optional reduced diameter neck **494** of container **435** which serves to prevent unscrewing of the cap therefrom. Optionally, a magnetic receiver may be mounted to the neck **494** to magnetically secure rod **343** when extended. Moreover, when the two-factor biometric plus physical device-based authentication has been verified by the sensors and software, then microprocessor **434** causes actuator **493** to retract rod **343** in an upward and/or outward direction released from the slot or hole in the container thereby allowing unscrewing of cap **425** from bottle **435**.

[0049] The device-based sensing may employ the RFID sensing and/or a manual push button code entry. It should alternately be appreciated that multiple biometric sensing such as fingerprint plus voice recognition, fingerprint plus camera imaging facial recognition, voice recognition plus camera imaging facial recognition, or any other combination thereof, may be employed instead of or in addition to the device-based contact methods.

[0050] Software instructions programmed and stored into memory **480** and operated by microprocessor **434**, are illustrated in FIGS. **16**, **17**A and **17**B. Examples of biometric sensing and software are disclosed in the following U.S. Pat. No. 7,142,699 entitled "Fingerprint Matching Using Ridge Feature Maps" which issued to Reisman and Ross on Nov. 28, 2006; U.S. Pat. No. 10,380,321 entitled "System, Method and Apparatus for Electronic Patient Care" which issued to Kamen et al. on Aug. 13, 2019; U.S. Pat. No. 10,402,827 entitled "Biometrics Transaction Processing" which issued to Sheets et al. on Sep. 3, 2019; and U.S. Pat. No. 10,404,754 entitled "Query System and Method to Determine Authentication Capabilities" which issued to Baghdasaryan et al. on Sep. 3, 2019. All of these patents are incorporated by reference herein.

[0051] The container will now be described in greater detail with reference to FIGS. **10**, **11** and **12**. This fifth embodiment container **421** includes outer vial wall **403** and inner vial wall **405**, both blow molded, injection molded or three-dimensionally printed from polymeric materials. Outer wall **403** includes a generally circular-cylindrical side wall section **495** (although it may have a 1-3° die-draw taper angle if molded) and a generally flat bottom wall section **496**. The interior and exterior surfaces of outer wall **403** are smooth but for external threads **497** adjacent an openly accessible upper end **498**.

[0052] Inner vial wall **405** has a generally cylindrical side wall section **499** and a bottom section **500** which generally align with the matching side and bottom sections of the outer wall **403**. Channels **407** circumferentially extend around side section **499** of inner vial wall **405** in a circular manner coaxially about a rotational centerline **501** with annular projections **502** radially and outwardly projecting from side section **499** in a corrugation-like manner. Each inwardly offset channel **407** is disposed between a pair of adjacent annular projections **502**. When inner vial wall **405** is inserted within the fluid contained in outer vial wall **403** during assembly, the aversive liquid fluid is pushed between the annular projections **502** and somewhat fills the annular compartments located between channels **407** and the interior surface of outer vial wall **403**. Annular projections **502** contact against and are bonded to the interior surface outer wall **403**. Furthermore, adhesive, ultrasonic or other bonding procedures may be used to sealingly affix each annular projection **502** to the interior surface of outer wall **403**. There is also a concave depressed wall **503** within bottom section **500** of inner vial wall **405**. This allows a channel compartment to be present between depressed wall **503** and an interior surface of bottom **496** of outer wall **403** to also receive the aversive fluid therein.

[0053] While various embodiments have been disclosed herein, it should be appreciated that other variations may be employed. For example, it is envisioned that the inner and outer vial walls may have other side and end view shapes, such as generally rectangular, generally square, generally hourglass, or the like. The fluid containing channels may alternately be vertically oriented (as shown in FIGS. **1**A-C) and parallel, diagonally oriented and parallel, crossing, side-view circles or rectangular or the like. Furthermore, it is alternately envisioned that the authentication sensors and electronics preferably disclosed herein as being internally mounted to the cap may alternately be mounted to the container. Moreover, other electromagnetic, purely magnetic, or mechanical lacking mechanisms may be substituted for the solenoid shown and described hereinabove. Any and/or all of the features of any of the embodiments disclosed herein may be mixed and matched, and/or substituted for any of the other embodiment structures and functions herein.

The foregoing description of the embodiments has been provided for purposes of illustration and description. It is not intended to be exhaustive or to limit the disclosure. Individual elements or features of a particular embodiment are generally not limited to that particular embodiment, but,